

COMPLETE LISTING OF CLAIMS
IN ASCENDING ORDER WITH STATUS INDICATOR

Claim 1 (currently amended): A Fibre Channel Arbitrated Loop interconnect system comprising:

a first port in a plurality of ports,

a second port in the plurality of ports,

said first and second ports including port logic to monitor Open (OPN) arbitrated loop primitives, and adapted to connect to devices supporting a Fibre Channel Arbitrated Loop protocol,

a crossbar switch coupled to the plurality of ports,

a route determination apparatus including a routing table comprised of Arbitrated Loop Physical Addresses (ALPAs) and their associated ports, the route determination apparatus separate from the plurality of ports and directly coupled to each of the plurality of ports and the crossbar switch through separate signaling paths, the route determination apparatus for configured for routing based on primitives by programming the crossbar switch to establish direct paths between the first and second ports in the crossbar switch according to received OPN arbitrated loop primitives, the direct paths excluding all other ports,

wherein the crossbar switch is configured as a primitive switch that creates the direct paths between the first and second ports based on the OPN arbitrated loop primitives, and

wherein priority for each port is independent of the ALPAs.

Claim 2 (canceled)

Claim 3 (currently amended): A system for interconnecting Fibre Channel Arbitrated Loop devices comprising:

- a first Arbitrated Loop containing one or more Fibre Channel arbitrated loop devices,
- a second Arbitrated Loop device,
- a Fibre Channel Arbitrated Loop interconnect system, the interconnect system

including:

- a first port in a plurality of ports, the first port containing port logic coupled to the first Arbitrated Loop,

- a second port in the plurality of ports, the second port containing port logic coupled to the second Arbitrated Loop,

- the first and second ports adapted to connect to devices supporting a Fibre Channel Arbitrated Loop protocol,

- route determination apparatus separate from the plurality of ports and directly coupled to each of the plurality of ports through separate signaling paths for and configured for routing based on primitives by selecting a direct route between the first and second ports based on received Fibre Channel Arbitrated Loop primitives from the ports, the direct route excluding all other ports, and including a routing table containing Arbitrated Loop Physical Addresses (ALPAs) and their associated ports, and

- a crossbar switch directly coupled to the first and second ports and to the route determination apparatus through separate signaling paths, the crossbar switch configured as a primitive switch for switching frames between ports under control of the route determination apparatus,

- wherein Fibre Channel frames are transferred between a device on the first Arbitrated Loop and the second Arbitrated Loop device, and

- wherein priority for each port is independent of the ALPAs.

Claim 4 (previously presented): The interconnect system of claim 3 wherein the Arbitrated Loop primitives that cause the crossbar switch to create paths between ports includes one or more of the following: Arbitrate (ARB), Open (OPN) and Close (CLS).

Claim 5 (previously presented): The interconnect system of claim 3 including a Receiver Ready (R_RDY) counter to count R_RDY's sent by an originating Fibre Channel Arbitrated Loop device before the Open (OPN) response is received by the originating Fibre Channel Arbitrated Loop Device.

Claim 6 (previously presented): The interconnect system of claim 3 wherein the second Arbitrated Loop device is on the first port.

Claim 7 (previously presented): The interconnect system of claim 3 wherein the second Arbitrated Loop device is on the second port.